

GLUSHKOV, V.

"New Type of Forge in the Machine Shop." Tr. from the Russian, p. 515, Praha, Vol. 3, no. 7, July 1953.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

GLUSHKOV, V.N., inzhener

Selection of heat energy carriers for the preheating of parts
manufactured in forging and stamping plants. Vest.mash.35

no.7:61-66 J1'55.

(MLRA 8:10)

(Steel forgings) (Sheet-metal work)

GLUSHKOV, V.N., inzh.

Selecting methods for annealing billets in forging and stamping
shops. Vest. masn. 38 no.1:56-62 Ja '58. (MIRA 11:1)

(Furnaces--Heat treating) (Forging)

GLUSHKOV, V.N.

Problems of the seven-year plan; main trends in the development of forging and stamping shops at tractor plants. Nauch. dokl. vys. shkoly; mash. i prib. no. 4:22-26 '58.

(MIRA 12:5)

(Tractors--Design and construction)

(Sheet-metal work)

GLUSHKOV, V.N.; BOGDAN, A.D.

Indices of the technical standard of operations in forging shops.
Kuz.-shtan.proizv. 1 no.5:37-41 My '59. (MIRA 12:10)
(Forging)

GLUSHKOV, V.N.

Selecting the energy carrier for continuous heating of metals.
Nauch. dokl. vys. shkoly; mash. i prib. no.2:101-158 '59.

(MIRA 12:12)

(Furnaces, Heating)

GLUSHKOV, V.N.

Technological conference on the economy of ferrous and nonferrous
metals and of electric power. Kuznetskaya pravda, 2 no. 8:3 of cover
Ag '60. (MIRA 14:2)

(Metalwork--Congresses)

GLUSHKOV, V.N.

Selecting a power carrier for the heating of blanks in a forge.
Kuz.-shtam. proizv. 3 no.3:33-35 Mr '61. (MIRA 14:6)
(Forge shops--Equipment and supplies)
(Lithium)

GLUSHKOV, V.N., inzh.

Some problems in the reorganization of forge and stamping shops.

Vest.mash. 41 no.7:58-62 J1 '61.

(MIRA 14:6)

(Forge shops---Technological innovations)

GEUSHKOV, V.N.; BOYCHENKO, A.N.

High energy machines. Kuz.--shtam, proizv. 5 no.2:23-27 P 163.
(MIRA 1642)

(United states--Forging machinery)

GLUSEKOV, V.N.

Scientific-technological conference "Progressive methods of metal heating before forging and die stamping and the efficient design of heavy equipment." Ann. of the Academy of Sciences of the USSR Ag. 1963. (MIRA 1963)

July 1985, Vol. 11, No. 1

James L. Hume is continuing forging links for crackpunks in the United States and West Germany. Phil, tech. exam. inform. (int. mach. anal. mat. mach. i. tech. inform. 19 no. 1. 1968: 14).

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GILBERT V, 7.3., 1965.

The seventh scientific technical conference on testing. Test.
Mashinost. 45 no.4:21 Apr 1965. (MIL 10:15)

GLUSHKOV, V.N.

Sectoral scientific and technical conference on metal heating.
Kuz.-skh.izv. 7 no.4847 P 165.

(MIRA 18:4)

MANUKYAN, A.A.; GLUSHKOV, V.P.; SHVEDKOVA, V.M.; SVIRIDOVA, Z.P.; CHEBOTAREVA, Ye.A.; SHUMILIN, V.I.; PUDINA, K.V.; BRAGINA, N.M.; LUTSKAYA, Ye.Ye.; KODACHENKO, A.S.; KOSOVA, V.A.; MOKLYARSKIY, B.I.; GRECHIKHIN, A.A.; KULIKOV, N.I.; RYDVANOV, N.P.; BEL'CHUK, A.I.; VINTSER, Yu.I.; ROZENTAL', Ye.I.; BELOUS, T.Ya.; SIDOROV, V.F.; ZHDANOVA, L.P.; ALEKSANDROVSKAYA, L.I.; KOVAL', V.V.; KHAVINSON, Ye.S., glavnyy red.; SOKOLOV, I.A., zam.glavnogo red.; ALEKSEYEV, A.M., red.; ARZUMANYAN, A.A., red.; BELYAKOV, A.S., red.; BECHIN, A.I., red.; VARGA, Ye.S., red.; LEMIN, I.M., red.; LYUBIMOVA, V.V., red.; SKOROV, G.Ye., red. V redaktsirovaniy uchastvovali: SHAPIRO, A.I., red.; TATISHCHEV, S.I., KOVRIGINA, Ye., tekhn.red.

[Economic conditions of capitalistic countries; review of business conditions for 1958 and the beginning of 1959] Ekonomicheskoe polozhenie kapitalisticheskikh stran; kon'iunktornyiy obzor za 1958 g. i nachalo 1959 g. Moskva, Izd-vo "Pravda," 1959. 127 p. (Prilozhenie k zhurnalu "Mirovaia ekonomika i mezhdunarodnye otnosheniia," no.8, avgust 1959 g.) (MIRA 12:9)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy. 2. Kollektiv sotrudnikov kon'iunktornogo sektora Instituta mirovoy ekonomiki i mezhdunarodnykh otnosheniy AN SSSR (for Glushkov, Shvedkova, Sviridova, Chebotareva, Shumilin, Pudina, Bragina, Lutsкая, Kodachenko, Kosova, Moklyarskiy, Grechikhin, Kulikov, Rydvanov, Bel'chuk, Vintser, Rozental', Belous, Sidorov, Zhdanova, Aleksandrovskaya, Koval'). (Economic conditions)

GLUSHKOV, V.P., kand. ekon. nauk; POKROVSKIY, A.I., kand. ekon. nauk; VEBER, A.B., kand. istor. nauk; VASIL'KOV, N.P., kand. ekon. nauk; ARDATEV, G.B., kand. ekon. nauk; TIMASHKOVA, O.K., kand. ekon. nauk; KHMEL'-NITSKAYA, Ye.L., doktor ekon. nauk, otv. red.; PANTELEYEV, V.I., red. izd-va; RYLINA, Yu.V., tekhn. red.

[Government ownership in Western Europe] Gosudarstvennaya sobstvennost' v stranakh Zapadnoi Evropy. Moskva, Izd-vo Akad. nauk SSSR, 1961. 463 p. (MIRA 14:11)

1. Akademiya nauk SSSR Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy. 2. Sektor stran Zapadnoy Yevropy Instituta mirovoy ekonomiki i mezhdunarodnykh otnosheniy AN SSSR (for all except Panteleyev, Rylyna).

(Europe, Western--Government ownership)

KILESSO, A.I.; FARAMAZYAN, R.A.; KONONYUK, B.Z.; MARTINSEN, Z.A.;
ANDREYEV, Yu.V.; SLAVIN, S.V.; RUSETSKIY, S.B.; GLUSHKOV,
V.P., otv. red.; PLISKINA, Ye.M., red.; TIKHOMIROVA, S.G.,
tekhn. red.

[The shipbuilding industry of capitalist countries] Sudo-
stroitel'naya promyshlennost' kapitalisticheskikh stran.
Moskva, Izd-vo AN SSSR, 1963. 471 p. (MIRA 16:10)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy.

(Shipbuilding)

AVERIN, Yu.A., inzh.; GLUSHKOV, Ye.F., inzh.; KARYAKIN, M.N., inzh.

Investigating the power factor of a.c. electric traction systems
used in rectifier electric locomotives. Trudy TSNII MPS no.156:33-48
'58. (MIRA 11:8)
(Electric locomotives) (Mercury-arc rectifiers)

REBRIK, B.N., kand.tekhn.nauk; GLUSHKOV, Ye.F., inzh.

New H60 a.c. locomotives. Vest.TSNII MPS 18 no.8:15-21 D
'59. (MIRA 13:9)

(Electric locomotives)

TIKHOMENEV, B.N., doktor tekhn.nauk; REBRIK, B.N., kand.tekhn.nauk; GLUSHKOV,
Ye.F., inzh.

Ways of improving the N60 diesel locomotive. Vest.TSNII MPS 20 no.3:
3-9 '61. (MIRA 14:5)

(Diesel locomotives)

GILBERT, Ye.F., inst.

Issues from current pulsation and the economic advantages of
smoothing reactors. Vest, TSNIi MKS 24 no.1:9-12 '65.

(MIRA 18:6)

GLUSHEV, Y. A. 1965.

Parameters of rectified current circuits on VL60 and VL80-005
electric locomotives. Trudy TSNII MPS no.286183-92 '65.

(MIRA 18:8)

REBRIK, B.N., kand.tekhn.nauk; GLUSHEKOV, Ye.F., inzh.

Studying the performance of the ignitrons of a.c. electric locomotives.
Trudy TSNII MPS no.286.131-139 '65.

(MIRA 18:3)

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AUTHORS: Penomarev-Stepney, A. A. Gushkov, Ye. A.

TITLE: Some methods for solving the problem of physical design of power reactors

PERIODICAL: Atomnaya energiya, v. 11, no. 1, 1966, pp. 25

TEXT: The physical design of a reactor consists in the solution of the following theoretical problem: To arrive at a given distribution law for the specific heat loss by spatial arrangement of the materials in the reactor. Some methods are discussed for treating the problem mathematically. There are two cases to be considered depending on the construction of the core: 1) reactors for which the heat-removing surface per unit volume of the core remains constant in the design of the core, and 2) reactors for which the heat-removing surface per unit mass is constant. The first case is treated first. The law of the heat escape distribution (per unit volume of the core) is given. The following calculations are made along general lines: Calculation of a thermal reactor in the one-group approximation. One obtains

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Some methods of ...

S/089/61/001/001/001/010
B102/3212

$$\left. \begin{aligned} D^2 \nabla^2 u &= \frac{d^2}{dt^2} S_0(r) Z(u), \\ D^2 \nabla^2 u_{n+1} &= \sum_{m=0}^n a_m u_{n-m} - \sum_{m=0}^n b_m u_{n-m} - q(u_{n-1}), \\ S_0(r) &= \sqrt{r} \sum_{m=0}^{\infty} a_m u_m(r), \end{aligned} \right\} \quad (3)$$

its solution according to Fourier method, given

$$\begin{aligned} Q_0(r) &= \frac{S_0(r)}{e^{im} n v_m(r) \sigma_e^m}, \\ n v_m(r) &= \sum_{n=1}^{\infty} B_n Y_n(r); \\ B_n &= A_n \frac{\int_{-a}^{a} Z(u^2) e^{-\frac{a^2}{2} \int_0^{u_{n-1}} \frac{F_0(u^2)}{3 \Sigma_0(u^2)} du^2} du^2}{\frac{1}{\sqrt{e^n}} \Sigma_{e0}^m (1 + a_n^2 L_0^2)} \end{aligned}$$

Card 2/7

Some methods of ...

100-101/001/001/003/010

where α_n^2 indicates the eigenvalues of the problem

$$\begin{aligned} \nabla^2 \psi_n(r) + \alpha_n^2 \psi_n(r) &= 0 \\ \psi_n(R) &= 0 \end{aligned} \quad (A)$$

A_n are the Fourier coefficients of the density of fission-neutron sources, namely,

$$S_n(r) = q_n(r)/r, \quad (1)$$

$$J(r) = \int_{-\infty}^{\infty} v_n \sigma_{fs}(u) n(r, u) du + v_n \sigma_{fb} n(r, u) \quad (2)$$

$J(\vec{r})$ being the fission integral for a fissionable nucleus. The problem (in age approximation) has no analytical solution for a reactor with reflector which differs in its properties from the medium in the core. Calculation of a thermal reactor in the multigroup approximation. The solution of the matrix equations gives for the steady distribution in the core
Card 3/7

Some methods of ...

S/029/51/011/001/003/010
E111/0211

$$\phi_0(r) = \frac{S_0(r)}{\sqrt{\pi} \sigma_0(r) v_0} \quad (13)$$

This equation represents the criticality condition for the reactor. Calculation of intermediate reactors. The neutron - physical problem is not analytically solvable in this case; recourse must be had to numerical methods. One possibility, for example, is the method of successive approximations with respect to the concentration of the fissile matter. In zeroth

approximation, $\phi_0^0(r) = S_0(r)/J^0(r)$, where $J^0(r)$ is calculated according to formula (2). With this value and the known $S_0(r)$ one has $\phi_0^1(r) = S_0(r)/J^1(r)$, and so on, till the ratio $S_0(r)/J^p(r)$ in the

pth approximation is a constant quantity. If the distribution law of heat emission is referred to the unit mass of the fissile material, it coincides for the thermal neutrons with the law of thermal neutron flux distribution. The problem of physical design in this case consists in a solution of the reactor equations for a given thermal neutron distribution $\phi_0(r) = \phi(r)$ in

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1-10-1981

Some methods of ...

$$\left. \begin{aligned} nc_0 &= nc'_0; \\ nc_{m+1} &= nc'_m; \\ D^p \nabla_n nc_0 &= D^p \nabla_n nc'_0 + \lambda^p \Delta nc'_m; \\ D^m \nabla_n nc_m &= D^m \nabla_n nc'_m + \Delta nc'_m. \end{aligned} \right\} \quad (18)$$

one obtains as solution for the first system

$$\begin{aligned} nc_0 &= B \sum_{i=1}^{\infty} \{1 + f(r)\}, \\ nc_{m+1} &= B. \end{aligned} \quad (19)$$

and for the second

$$\begin{aligned} nc'_0 &= B A_1' \psi_1'(r); \\ nc'_m &= B \{A_1' \psi_1'(r) + A_2' \psi_2'(r)\}. \end{aligned} \quad (20)$$

Card 6/7

Some methods of ...

S/089/61/011/001/003/010
B102/E214

where $\psi(\vec{r}) = \psi_1(\vec{r}) + \frac{1}{\psi_0 - 1} \psi_2(\vec{r})$ is the solution of the equation $\nabla^2 \psi = \lambda^2 \psi$,

$$\psi_1 = \left(1 - \frac{\tau_1}{L_0}\right) \frac{\sum_{i=1}^m \psi_i}{\sum_{i=1}^m \psi_i} \quad \text{where are 4 figures and 2 references: 1. Soviet-}$$

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SUBMITTED: JUL 7, 1963

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Card 7/7

S/089/62/C12/005/C11/C14
B102/B104

24 0022
AUTHORS: Ponomarev-Stepnoy, N. N., Glushkov, Ye. S.

TITLE: The problem of physical profiling of the heat release in heterogeneous power reactors

PERIODICAL: Atomnaya energiya, v. 12, no. 5, 1962, 418-419

TEXT: Physical profiling of heat production in a homogeneous reactor has been considered in a previous paper (Atomnaya energiya, 11, no. 1, 19, 1961). A heterogeneous reactor is now considered and profiling is carried out in two-group approximation for a homogenized reactor working with

pure fissile material as fuel. With $\bar{n}v_2, \bar{c}_2^5$ $F = B = \text{const}$ as the

profiling condition (demand for constant specific volume heat production) the two-group reactor equations

$$D_1 \bar{n}v_1 - \frac{1}{c_1} \bar{n}v_1 + v_2 - \frac{1}{c_2} \bar{n}v_2 = 0; \quad (1)$$

$$-D_2 \bar{n}v_2 + \frac{1}{c_1} \bar{n}v_1 - \frac{1}{c_2} \bar{n}v_2 - \frac{1}{c_2} \bar{n}v_2 = 0.$$

Card 1/3

The problem of physical profiling of ...

3/089/62/012/005/011/014
B102/B104

can be written as

$$\left. \begin{aligned} D_1 \nabla^2 \bar{n}_1 - \Sigma_1 \bar{n}_1 + \nu_1^2 / \beta D = 0; \\ D_2 \nabla^2 \bar{n}_2 + \Sigma_1 \bar{n}_1 - f_0 D - \rho_0 \bar{n}_1 \bar{n}_2 E = 0. \end{aligned} \right\} \quad (3).$$

Σ_1 is the macroscopic absorption cross section for the fuel, Σ_2 is that for the remaining material, ρ_0 is the nuclear fuel density in the lumps, ρ_2 moderator nuclear density, $\beta = V_1/V_2 + 1$, V_1 - lump volume, V_2 - cell volume; $\nu = \nu_1/\nu_2 = \text{const}$; $E = \nu_1^2/\nu_2^2 = \text{const}$; \bar{n}_1 , \bar{n}_2 and \bar{n} are the mean neutron fluxes in cell, lump and moderator; σ_1 , σ_2 and σ_0 are the microscopic absorption cross sections for fuel, moderator and fuel diluent ($\sigma_0 = C$). β is the mean number of secondary neutrons per thermal neutron capture, D - neutron diffusion coefficient.

Σ_0 - macroscopic slowing-down cross section. The subscripts 1 and 2
Card 2/3

The problem of physical profiling of ... 8/089/42/012/005/011/014
B102/B104

refer to fast and thermal neutrons. The unknown functions \overline{nv} , $\overline{nv_0}$, $\overline{v_0}$ and $\overline{v_0^2}$ are determined if additional relations between them are known. In practice they have to be determined from the reactor design. If $\overline{v_0}$ is a known function of the radius in the core, $\overline{nv_0} = \text{const}$, $\overline{v_0^2} = \text{const}$, or $\overline{v_0^2}$ is a known function of the coordinates. Such possibilities are discussed in detail.

SUBMITTED: April 27, 1961

Card 3/3

5/329/52/512/355/512/014
3102/3104

26.0221
AUTHORS: Leonov, V. S., Gushkov, V. S.

TITLE: Solution of reactor equations with allowance for variable moderator density in physical profiling

ABSTRACT: Atomnaya energiya, v. 1, no. 1, 1961, 412-421

NOTE: A method is proposed for longitudinal energy release profiling with a given fission neutron source distribution. The variation in moderator density along the reactor is taken into account. The problem is solved in two-group approximation, assuming that the specific energy release is a given function of the coordinates. The reactor equations in plane geometry

$$\left. \begin{aligned} \frac{d}{dx} \left(D_1 \frac{d}{dx} n v_1 \right) - \Sigma_1 n v_1 - S_0(x) &= 0; \\ \frac{d}{dx} \left(D_2 \frac{d}{dx} n v_2 \right) + \Sigma_1 n v_1 - \Sigma_2^s n v_1 - \Sigma_2^a n v_2 &= 0, \end{aligned} \right\} (1)$$

with $S_0(x) = 10^{-5} \text{ g/cm}^2 \text{ sec}^{-1}$ is a given coordinate function and

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Solution of regulator equations with ...

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3100/3100

$$D_j = \frac{D_j^0}{\beta(x)} = \Sigma_1 - \Sigma_1^0 \beta(x); \Sigma_2^1 = \Sigma_2^{00} \beta(x) \quad (1)$$

can be rewritten as

$$\left. \begin{aligned} D_1^0 \frac{d^2 n v_1}{dy^2} - \Sigma_1^0 n v_1 &= \frac{S_0(x)}{\beta(x)}; \\ D_2^0 \frac{d^2 n v_2}{dy^2} - \Sigma_2^0 n v_2 - \Sigma_2^{00} n v_1 &= \frac{S_0(x)}{\Sigma_2^0 \beta(x)}, \end{aligned} \right\} \quad (2)$$

$dy = \beta(x) dx.$

Since $\beta(x)$ is a known coordinate function. Then the system (2) can be represented as $d\vec{v}/dy = \vec{L}\vec{v} + \vec{u}(y)$, with

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Solution of master equations with ...

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B102/2104

$$Q = \begin{pmatrix} nv_1 \\ nv_2 \\ \frac{d}{dy} nv_1 \\ \frac{d}{dy} nv_2 \end{pmatrix}$$

$$\hat{L} = \begin{pmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \\ \frac{1}{\tau_0} & 0 & 0 & 0 \\ -\frac{\Sigma_1^0}{D_2^0} & 1 & 0 & 0 \end{pmatrix}; \quad \frac{1}{\tau_0} = \frac{\Sigma_1^0}{D_1^0}; \quad \frac{1}{I_3^0} = \frac{\Sigma_2^0}{D_1^0}$$

$$Q(x) = \begin{pmatrix} 0 \\ 0 \\ -\frac{S_0(x)}{D_1^0(x)} \\ \frac{S_1(x)}{\sqrt{D_2^0(x)}} \end{pmatrix}$$

\hat{L} and $-Q(x)$ are vectors, $y = \begin{matrix} x \\ 0 \end{matrix}$ is a vector. The system (5) can be solved by a usual procedure: First the homogeneous system $\frac{dy}{dx} = \hat{L}y$ is solved and then a particular solution of (5) is sought. The general solution of (5) is then obtained as the sum of both.

SUBMITTED: April 27, 1961

Carl 3/3

GARIN, V. P.; GLUCHKOV, V. I.; KUCHENOV, R. S.

"Data on population, migration, and other factors, with brief notes
on the population."

report submitted for the 1st Int. Conf. on the State of the World, Moscow,
11-12 Oct. 1964.

L 05647-67 EWT(m) JR

ACC NR: AP6021524

SOURCE CODE: UR/CO89/66/020/006/0478/0482

AUTHOR: Glushkov, Ye. S.; Ponomarev-Stepnov, N. N.

ORG: none

TITLE: Experimental study of modifying the energy release curve of reactors by redistributing the fissionable material

SOURCE: Atomnaya energiya, v. 20, no. 6, 1966, 478-482

TOPIC TAGS: nuclear reactor power, nuclear reactor moderator, beryllium, enriched uranium, reactor neutron flux, multiplication factor

ABSTRACT: The authors report certain results of an experimental study of adjusting the distribution of energy release through the reactor by redistributing the fissionable material so as to optimize the reactor design. The experiments were carried out with critical assemblies in which the moderator was beryllium oxide and the fuel elements were teflon-4 foils containing 90% enriched uranium as a filler. The critical assemblies were rectangular in form. The fuel elements were arranged in horizontal layers and distributed over the height of the assembly. The total number of fuel elements in each layer was constant, and their distribution along one of the horizontal directions was varied. The reactor was made critical for each distribution of the fuel elements by changing the height of the assembly and its width, keeping its length and the thicknesses of the reflectors constant. The distribution of the thermal-neutron flux was measured for each assembly with the aid of indium foils. The experi-

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ments were made for four distribution profiles of the fissioning material (uniform, symmetrical with higher concentration in the center of the active zone, symmetrical with high concentration at the periphery, and asymmetrical). The space-energy distribution of the neutrons was calculated for each assembly in the diffusion many-group approximation (16 groups). The uranium concentration distribution was such that the heat release distribution per unit mass was uniform. The group calculations and the experimental results were in satisfactory agreement. Similarly, the values obtained for the effective multiplication factor obtained during the course of the calculations and in the experiment were in agreement. It is concluded that the distribution of energy release can be modified by varying the concentration of the fissioning material in real reactors, too. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 18/ SUBM DATE: 26Oct65/ ORIG REF: 005/ OTH REF: 004

Card 2/2 *eqh*

ROZHKOVSKIY, D.A.; GLUSHKOV, Yu.I.; DZHAKUSHEVA, K.G.

Nebula Omega and its environs according to photographs obtained
on the 50 cm. Maksutov telescope. Izv.Astrofiz.inst.AN Kazakh.
SSR 14:19-33 '62. (MIRA 15:8)
(Nebulae)

ROZHEVSKIY, D.S., GLUSHKOV, Yuri, K. CHAYCH, A.V.

Results of installing a Cassegrain secondary mirror in a high-power
Mikheyev telescope. Inv. AN Yezhko, S.M. Ser. Inform. rank and is:
50-68-102, (MIR 12-1)

DZHAKUSHEVA, K.G.; GLUSHKOV, Yu.I.; MIKHAYLOVA, N.V.; MGBHAYEVA, V.Ye.;
ROZHKOVSKIY, D.A.

Study of the astroclimate of the Alma-Ata region. Trudy
Astrofiz. inst. AN Kazakh.SSR 4:5-48 '63. (MIRA 16:11)

GLUSHKOV, Yu.I.

Polarization and continuous spectrum of NGC 2498. Trudy Astrofiz.
inst. AN Kazakh. SSR 5:277-284 1965. (MIRA 18:6)

LOSEV, Izrail' Aleksandrovich; PUKHOV, Anatoliy Aleksandrovich; GLUSHKOV, Yu.M., nauchnyy red.; ZAVEL'SKAYA, V.M., red. izd-va; KONTOVICH, A.I., tekhn. red.

[Electrical equipment of workboats and floating cranes] Elektrooboruzhivanie sudov i plavuchikh kranov tekhnicheskogo flota. Leningrad, Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 326 p.

(MIRA 14:8)

(Workboats--Electric equipment) (Floating cranes--Electric equipment)

NOVOKHATKA, D. A.; GLUSHKOVA, A. A.; CHETVERIKOVA, N. M.

Reaction of phenol with methylacetylene in the presence of boron
fluoride compounds. Zhur. VKHO 7 no.5:586 '62.
(MIRA 15:10)

1. Lisichanskiy filial Gosudarstvennogo proyektного i nauchno-
issledovatel'skogo instituta azotnoy promyshlennosti.

(Phenol) (Propyne)

I 21186-66 EWT(m)/EWP(1)/T RM
 ACC NR: AP6009708 (A) SOURCE CODE: UR/0054/66/COO/003/0015/0016

AUTHOR: Novokhatka, D. A.; Matyushenskiy, B. V.; Glushkova, A. A.; Seraya, V. I.

ORG: none

TITLE: Preparation of diphenylolpropane from phenol and methylacetylene 19
13

SOURCE: Khimicheskaya promyshlennost', no. 3, 1966, 15-16

TOPIC TAGS: bisphenol A, bisparahydroxyphenylpropane, diphenylolpropane, polycarbonate, phenol, methylacetylene, boron trifluoride, manganese sulfate

ABSTRACT: A new preparative method has been developed for high purity 2,2-bis(4-hydroxyphenyl)propane (bisphenol-A), suitable for making polycarbonates. The method is based on the alkylation of phenol with methylacetylene in the presence of boron trifluoride as catalyst. Preliminary study indicated that the yield of bisphenol-A depends on the phenol:methylacetylene molar ratio and on temperature, and that the reaction is promoted by salts of manganese, iron or bismuth taken in small amounts, i.e., 0.04%. Water inhibits the reaction. The optimum conditions are: temperature, 45-50C; phenol:methylacetylene molar ratio, 12:1; BF₃, 2.5%; MnSO₄, 0.04% (both on the phenol). The catalyst can be recovered from the residual phenol in the form of a phenol complex. A flow diagram and description of the process are given in the original. The experiments conducted on a pilot plant indicated that the bisphenol-A yield is 89%, if 90% methylacetylene is used; the yield can be increased to 93-95%.

Card 1/2 UDC: 547.631.4'211.07:542.973:546.273'161

L 21186-66

ACC NR: AP6009708

(on phenol reacted), if 99% methylacetylene is used. The cost per ton of bisphenol-A is calculated to be 8.2% lower than that produced by the hydrochloric acid method. [E]

Orig. art. has: 1 figure and 1 table.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 003/ AND PRESS: 4/22/22

Card 2/2 BK

DOLIVO-DEBROVOL'SKIY, L.B.; GLUSHKOVA, A.I.; KUZMANINA, T.K.;
EL'PINER, L.I.; YAKOVLEV, V.K.

Effect of biomycin and penicillin on the vital activity of
some algae. Biul. MOIP. Otd. biol. 67 no.1:154-155 Ja-F '62.
(MIRA 15:3)

(ALGAE)

(AUREOMYCIN)

(PENICILLIN)

Shanovskiy L. M. , Kollonova, L. M. , Glushkova, A. S.

AUTHORS: Shanovskiy, L. M. , Kollonova, L. M. , Glushkova, A. S.

TITLE: A Method for the Growing of Alkali-Halide-Phosphors for Scintillation Counters (Metodika vyrashchivaniya shchelochno-galidnykh fosforov dlya stsintillyatsionnykh schetchnikov)

PERIODICAL: Investiya AN SSSR Seriya Fizicheskaya, 1955, Vol. 12, No. 1, pp. 9 - 11 (USSR)

ABSTRACT: The method worked out here for the growing of monocrystals is based on a modified method by Stockbarger. Crystallization is carried out from the melt in soldered cylindrical amples of quartz-glass. In this variant the difficulty connected with the design of the activator no longer exists. At the same time, a complete isolation of the salt from atmospheric humidity is attained, and thus the possibility of a chemical decomposition is excluded. The velocity with which the monocrystal is grown is given by the displacement of the ampule against the furnace. The furnace is an echelon furnace and is divided into two sections by a ring wall. At the tip of the ampule-cone an incubation zone which, in the further process, imparts the orientation to the entire crystal. It is necessary that in the crystallization zone, at the level of the ring wall or somewhat higher, the temperature distribution

Card 1/5

11-1-77

A Method for the Growing of Alkali-Halide-Phosphors for Scintillation Counters

in the cross section has the shape of a paraboloid of revolution with the tip in the center of the ring wall. Under these conditions the crystallization begins from a uniform center at the axis of the quartz ampule and all admixtures not taken up by the crystal are displaced upwards to the melt and to the walls of the vessel. The constancy of the temperature in the furnace is controlled by a controlling potentiometer by means of the connection of a series resistance. A platinum-platinum rhodium-thermocouple serves as transmitter for the potentiometer. The isotherm of the growth in the crystal must be unchanged during the entire process of growing. In the second chapter the activator-distribution in the crystal phosphor is investigated. The concentration of the additions in the various parts of the monocrystal does not remain constant in all those cases in which in the growing of the crystal from the melt the compositions of the solid and the liquid phase with regard to the equilibrium conditions are not in agreement. Most frequently the distribution coefficient of the introduced and the accidental admixtures between these two phases is smaller than one. Additional factors are impressed upon the equilibrium of transfer of the distribution of additions. These factors are dependent on the crystallization velocity and on the diffusion coefficient of the additions in the melt. It is shown that the amplitude of

Card 2/5

11-1-1/80

A Method for the Growing of Alkali-Halide-Phosphors for Scintillation Counters

the scintillation impulses of the given monochromatic γ -radiation changes with the increase in the activator-concentration in the crystal phosphor. The third chapter deals with the selection of the activator and its dosing. It is shown that the less soluble compounds, in the case of an equal molar concentration of the phosphors, form a hundred times higher concentration of the centers of the additional absorption and luminescence in one unit of volume. It is shown that only part of the introduced activating additions play the part of an activator in the phosphors. When sufficiently pure salts are used, quite transparent monocrystals can be obtained with a Pb_2O -activator and the process of growing becomes considerably simpler. The last chapter treats the annealing of the crystal phosphors. As the alkali-halide-crystals possess a low thermal conductivity, deformation-forces causing a mosaic structure form during a too rapid cooling. The annealing liquidates this mosaic structure. The monocrystals must withstand a high temperature and must then be slowly cooled. It is shown that at high temperatures, even though the diffusion coefficient of the additions in the crystal lattice becomes higher, the lattice

Card 3/5

11-1-1/20

A Method for the Growing of Alkali-Halide-Phosphors for Scintillation Counters

-treatment nevertheless, as the test show, does not lead to a compensation in the composition of the crystal phosphor. In the author's opinion, the most important cause of the decrease in the light-response of the luminescence in polyhedral crystals is the following: the luminescence of the crystal phosphors is the result of a recombination of the electrons with the holes at the contact-surfaces formed by the activator. The luminescence depends on that part of the electrons and holes that reach these surfaces in their motion from the place where they form. A recombination of these contact-surfaces, however, is realized at ordinary temperatures without a radiation. But other inner surfaces not connected with the activator may also occur in the crystal. These are effective traps for the electrons and holes and diminish the emission of light in the scintillation. Good annealing improves the structure of the crystals. There are 6 references, 3 of which are Slavic.

Card 4/5

AS-1-1/20
A Method for the Growing of Alkali-Halide-Phosphors for Scintillation Counters

ASSOCIATION: All-Union Institute for Mineral Raw Materials
(Vsesoyuznyy institut mineral'nykh surovin)

AVAILABLE: Library of Congress

1. Crystals
2. Single crystals-Growth

Card 5/5

L 31354-65 EWT(1)/I/EEC(b)-2 IJP(c)/A: MDC/AS(wp)-2/ASD(a)-5/AFNL/SSD(a)/
RAEM(c)/ESD(gs)/ESD(t)

S/0058/64/000/000/0047/0047

ACCESSION NR: AR5000760

SOURCE: Ref. zh. Fizika, Abs 9D351

AUTHORS: Shamovskiy, L. M.; Glushkova, A. S.

TITLE: Growing of spectrometric scintillators

CITED SOURCE: Sb. Stsintillyatory* i stsintillyats. materialy*. Khar'kov, Khar'kovsk.
un-t, 1963, 5-12

TOPIC TAGS: scintillator, spectrometry, crystal growth, fluorescence center

TRANSLATION: The authors assume that the fluorescence centers are produced in crystal phosphors as a result of localization of the activating impurities on the structural defects of the lattice. A new technology is proposed for growing NaI-Tl crystals, starting from this assumption and from the experimentally demonstrated independence of the yield of scintillations in a wide range of variation of the activator concentrations.

Card 1/2

L 31354-65

ACCESSION NR: AR5000760

The crystallization is carried out at a high temperature gradient, thus removing the danger of precipitation of the activator and of contaminating impurities in the form of a separate phase. To reduce the degree of "hydrolysis" of NaI, it is recommended to de-oxidize the melt with reducers whose oxidation products are volatile. It is proposed to exercise control over the annealing of the crystals by monitoring the change in the crystal excitation and glow spectra. T Razumova.

SUB CODE: OP, SS

ENCL: 00

Card 2/2

BREGADZE, I.L.; KORNILOVA, N.F.; SERGEYEVA, A.P.; GLUSHKOVA, A.Ya.

Changes in the absorptive capacity of the peritoneum in exsanguination. Khirurgiia 36 no.2:82-86 P '60. (MIRA 13:12)
(PEPTIC ULCER) (PERITONEUM)

BLEDNYKH, N.V.; GLUSHKOVA, G.V.; SPASSKAYA, A.S.

Changes in the lability of stimulated tissues due to the effect of
vitamin B₁. Trudy Kirov. otd. Vses. fiziol. ob-va i no.1:42-51
'60. (MIRA 14:8)

1. Fiziologicheskaya laboratoriya Kirovskogo gosudarstvennogo
pedagogicheskogo instituta imeni V.I.Lenina.
(THIAMINE)

GLUSHKOVA, I.S.; MIKHAYLOVSKIY, V.S.; FAYNZIL'BER, Ya.I.

Clinical aspects, diagnosis, and therapy of severe cerebrocranial injuries. Vop.neirokhir. 19 no.2:15-22 Mr-Apr '55. (MLRA 3:7)

1. Iz Instituta nevrokhirurgii Ministerstva zdravookhraneniya USSR.
(HEAD, wounds and injuries,
clin. aspects, diag. & ther.)
(WOUNDS AND INJURIES,
head, clin. aspects, diag. & ther.)

GLUSHKOVA, I.S.; KANYUKA, Yu.I.; KOPYAKOVSKIY, Yu.I.; KOROL', A.P.;
~~LAPONOGOV, O.A.; YANOVSKIY, G.I.~~

Focal and general brain symptoms of supratentorial tumors of varying
histostructure. Probl.neirokhir. 4:19-32 '59. (MIRA 13:11)
(BRAIN--TUMORS)

GLUSHKOVA, I.S.; LAPONOGOV, O.A.

Meningoencephalitis with hydrocephalus appearing as a brain tumor.
Zhur. nevr. i psikh. 61 no.4:517-521 '61. (MIRA 14:7)

1. Institut neyrokhirurgii (dir. - prof. A.I.Arutyunov) Ministerstva
zdravookhraneniya USSR, Kiev.
(MENINGITIS) (ENCEPHALITIS) (HYDROCEPHALUS)

GLUSHKOVA, I.S.

Review of A.P. Burlutskii's book "Tumors of the thyroid
gland". Vop. neirokhir. 27 no.2:63 Mr-Apr '63.
(MIRA 17:2)

24(7)

PLATE I BOOK EXPLOITATION

L'ov, Universitet

Materialy I Vsesoyuznogo sovetskaniya po spektroskopii, 1956.
t. III. Atomnaya spektroskopiya (Materialy of the 10th All-Union
Congress on Spectroscopy, 1956. Vol. 3: Atomic spectroscopy)
Gosvydvo L'vovskogo univ., 1958. 568 p. (Series: Iste
Naukovedcheskiy sbornik, vyp. 4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Kazaniya po
spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.);
V.I. Fedotkin, Doctor of Physical and Mathematical Sciences;
V.I. Fabrikant, Doctor of Physical and Mathematical Sciences;
V.I. Fabrikant, Doctor of Physical and Mathematical Sciences;
V.O. Koritskiy, Candidate of Technical Sciences; L.K. Klimovskaya,
Candidate of Physical and Mathematical Sciences; V.S. Milyshechuk
(Deceased), Doctor of Physical and Mathematical Sciences; A.Ye.
Glauber, Doctor of Physical and Mathematical Sciences;
M.I. Gerasimov, Doctor of Physical and Mathematical Sciences;
M.I. Gerasimov, Doctor of Physical and Mathematical Sciences;
M.I. Gerasimov, Doctor of Physical and Mathematical Sciences;

Purpose: This book is intended for scientists and researchers in
the field of spectroscopy, as well as for technical personnel
using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies
of atomic spectroscopy conducted at the 10th All-Union Confer-
ence on Spectroscopy in 1956. The studies were carried out by
scientific and technical institutes and include
extensive bibliographies of Soviet and other sources of rare earths,
studies cover many phases of spectroscopy: spectroscopy of rare earths,
electromagnetic radiation, physicochemical methods for controlling
uranium production, physical and chemical dispersion in metal vapors,
optics and spectroscopy, absorption theory, spectrum analysis of ores
spectroscopy, photographic methods for quantitative spectrum
analysis, photometric methods for quantitative spectrum analysis,
and alloys, spectral determination of
hydrogen content of metals by means of isotopes, analysis
atlas of spectral lines, spark spectroscopy, statistical
statistical study of variation in the parameters of calibration
curves, determination of trace elements, spectrum analysis in
metallurgy, thermometry in metallurgy, and principles and
practice of spectrochemical analysis.

Card 2/31

Kirichenko, A.I. Spectral Method for the Determination of
Sodium and Potassium in Charotte, Ditas Erika, Magnazite,
and Other Refractory Materials 477
Olshenko, L.A., M.A. Zaitin, and A.M. Sharvin. Experimental
Study of the Relationship Between the Relative Intensity of
Spectral Lines of Chromium, and Nickel Spectral Lines and the
Concentration in the Standard Samples 483
Ostrowski, R.I., and V.S. Gogolova. Spectrum Analysis of Pure
Metal Antimony 487
Yerko, V.P., and N.I. Bugayeva. Spectrographic Determination
of Iron, Aluminum, Calcium, Magnesium, Copper and Nickel in
Metal Manganese of High Purity 490
Lifshits, Ye.V., and N.I. Bugayeva. Spectrum Analysis of
Chromium for the Determination of Antimony 491

Card 27/31

MATIS, E.G., entomolog; GLUSHKOVA, L.A., fitopatolog

Bean pests and diseases in Kustanay Province. Zashch. rast.
ot vred. i bol. 7 no.2:17 F '62. (MIRA 15:12)

1. Kustanayskaya opytnaya stantsiya, Karabalykskiy rayon,
Kustanayskaya oblast'.
(Kustanay Province--Beans--Diseases and pests)

GLUSHKOVA L. F.

5/016/60/014/008/007/014
0015/004

AUTHORS:

Shakparonov, M. I., Belantova, N. A., Tel'shuk, G. I.,
Gul'tai, G. V., Shalov, V. V., Glushkova, L. F., and
Malyukova, M. I. (Moscow)

TITLE:

Investigation of Pressure and Density of the Vapor in
Systems Containing Granoellon Hexadecane, 1. The System
Benzene - Methyl-dichlorosilane - Methyl-phenyl-
dichlorosilane

PERIODICAL:

Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8,
pp. 1754-1760

NOTE: The authors determined pressure and density of the vapor of a mixture of halogen alkyl silanes and aryl silanes since these substances readily react with water vapor or metals, dissolve in water, and are easily polymerized. In the present paper, they report on the study of benzene - methyl-dichlorosilane - methyl-phenyl-dichlorosilane. The experimental arrangement (Fig. 1) described in Ref. 2 is based on the

Card 1/3

principle of hydrostatic weighing, and is thoroughly explained. The apparatus includes a quartz balance suspended in a glass balloon in a thermostat. In addition, there is the evaporator connected with an air jacket, balloon and vacuum pump, and a quartz bulb with a heated pipe. A quartz ball is suspended from the thermally insulated balance. As the vapor of the substances enters the quartz bulb, the quartz ball loses in weight of the vapor. The density can be determined from the decrease in weight of the ball. The method of operation, the calibration of the instrument, and an evaluation of the errors of measurement are given. The authors also give the molecular weight of the liquid vapors as calculated by the vapor pressure method, and compare it with data of molecular weight determined by gas-liquid chromatography and density values of methyl-dichlorosilane and methyl-phenyl-dichlorosilane, as well as their solutions in benzene. The results show that the vapors represent associates completely. The results

Card 2/3

constant for the vapors was calculated, and given in Tables 1 and 2. It is found that at 400-500°C the vapor composition of the associates benzene - methyl-dichlorosilane - methyl-phenyl-dichlorosilane is practically equal to the vapor of the corresponding binary mixtures. The authors also give the results of the investigation of the enthalpies of solution of the vapors of the associates in benzene and in the vapors of the associates and in benzene.

REFERENCES: 1. Soviet and 2. 2.

ASSOCIATION: Moscow State University, Faculty of Chemistry

SUBMITTED: October 30, 1959

Card 3/3

5/076/60/C14/004003/02
5015, 5016
V. M. ...

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PERIODICAL:
JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
P. 1316-1317

[illegible][illegible]

7:45

[illegible]

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1990

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Card 5/6

[illegible]

SUBMITTED: October 30, 1965
FILED: 8/6

BALAMUTOVA, E.A.; SHAKHPARONOV, M.I.; LEL'CHUK, S.L.; LOMOV, A.L.;
MAL'KOVA, G.N.; MARTYNOVA, M.Ye.; GLUSHKOVA, L.F.

Vapor pressure and density in systems containing organo-
silicon compounds. Part 2: The systems: methyldichlorosilane-
methyltrichlorosilane - methylphenyldichlorosilane and
methylphenyldichlorosilane - methylchlorophenyldichlorosilane -
methyldichlorophenyldichlorosilane. Zhur.fiz.khim. 34 no.9:
1916-1919 S '60. (MIRA 13:9)

1. Moskovskiy gosuda-stvennyy universitet im. M.V.Lomonosova.
(Silane) (Systems (Chemistry)) (Vapor pressure)

RAPOPORT, Ye.A., inzh.; GLUSEKOVA, L.I., inzh.

Condenser discharge welding of contact brushes. Svnt.
proizv. no.5:35 My '64. (MIRA 18:11)

MORGUN, G.Ye.; MALINOVSKIY, M.S.; GLUSEHOVA, L.V.

Formation of heterocyclic compounds from amines and ethylene glycol.
Ukr.khim.zhur. 28 no.7:852-854 '62. (MIRA 15:12)

1. L'vovskiy gosudarstvennyy universitet im.Iy.Franko.
(Heterocyclic compounds) (Amines) (Ethylene glycol)

L 26342-66 EWP(j)/EWT(m) RM

ACC NR: AP6019324

SOURCE CODE: UR/0079/65/035/008/1481/1483

AUTHOR: Zemlyanskiy, N. I.; Glushkova, L. V.

ORG: L'vov State University (L'vovskiy gosudarstvennyy universitet)

TITLE: Synthesis of unsaturated esters of O,O-dialkyldithiophosphoric acids

SOURCE: Zhurnal obshchey khimii, v. 35, no. 8, 1965, 1481-1483

TOPIC TAGS: organic synthetic process; phosphate ester, brominated organic compound, insect control

ABSTRACT: With the view to developing substances effective in the control of agricultural pests, the synthesis of esters of O, O-dialkyldithiophosphoric acids with propargyl bromide or allyl bromide in an acetone solution, compounds $(RO)_2P(=S)-SR'$ (I) were prepared with 90-95% yields. When the reaction was carried out in a benzene solution, the yields were 58-67%. The following compounds were obtained: I (R = Et, R' = $CH_2-CH=CH_2$); I (R = iso-Pr, R' = $CH_2-CH=CH_2$); I (R = n-Pr, R' = $CH_2-CH=CH_2$); I (R = n-Bu, R' = $CH_2-CH=CH_2$); I (R = Et, R' = $CH_2-C\equiv CH$); I (R = iso-Pr, R' = $CH_2-C\equiv CH$); I (R = n-Pr, R' = $CH_2-C\equiv CH$); I (R = n-Bu, R' = $CH_2-C\equiv CH$). They were liquids which could be distilled in vacuo without decomposition and were readily soluble in ether, acetone, benzene and petroleum ether, but practically insoluble in water.

Orig. art. has: 1 table. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 29Jul64 / ORIG REF: 003 / CTH REF: 001

Card 1/1

UDC: 547.26.118

L 51427-65 EWT(n)/EPF(c)/EMP(j)/T/EWA(c) Pc-4/Pr-4 EPL JW/RM
 UR/0286/85/000/008/0021/0021
 66.095.02
 23
 3
 ACCESSION NR: AP5015487
 AUTHOR: Taranenko, A. S.; Glushkova, L. V.
 TITLE: A method for producing N,N'-dinitroso-N,N'-diphenyl-n-phenylendiamine.
 Class 12, No. 170064
 SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 21.
 TOPIC TAGS: diamine, hydrochloric acid, acetone, sodium nitrite
 ABSTRACT: This Author's Certificate introduces a method for producing N,N'-dinitroso-N,N'-diphenyl-n-phenylendiamine by treating N,N'-diphenyl-n-phenylendiamine with sodium nitrite in the presence of an acid. The quality of the product is improved by carrying out the process in the presence of hydrochloric acid and acetone.
 ASSOCIATION: Nauchno-issledovatel'skiy institut khimikatov dlya polimernykh materialov (Scientific Research Institute of Chemicals for Polymer Materials)
 SUBMITTED: 08Jun64 ENCL: 00 SIB CODE: 02, G:
 Card 1/2

L 51427-65

ACCESSION NR: AP5015487

NO REF SOV: 000

OTHER: 000

0

ml
Card 2/2

L 06512-67 EWT(m)/ENP(j) RM
ACC NR: AP7000480

SOURCE CODE: UR/0079/66/036/006/1118/1121

AUTHOR: Zemlyanskiy, N. I.; Prib, O. A.; Glushkova, L. V.

ORG: L'vov State University (L'vovskiy gosudarstvennyy universitet)

TITLE: Arylation of O,O-dialkyldithiophosphates

SOURCE: Zhurnal obshchey khimii, v. 36, no. 6, 1966, 1118-1121

TOPIC TAGS: benzene derivative, sulfonic acid, ester

ABSTRACT: The reaction of certain aryl esters of benzenesulfonic acid with potassium salts of O,O-dialkyldithiophosphoric acids was studied in an effort to expand the methods of producing O,O-dialkyl-S-aryldithiophosphates, promising pesticides with low toxicity for warm-blooded animals and man. Potassium O,O-dialkyldithiophosphates in acetone solution react readily with 2,4- and 2,6-dinitrophenyl esters of benzenesulfonic acid at room temperature, producing good yields of O,O-dialkyl-S-dinitrophenyl esters of dithiophosphoric acids. The potassium O,O-dialkyldithiophosphates do not react with phenyl and mononitro- and monochlorophenyl esters of p-chloro- and p-methylbenzenesulfonic acids even with prolonged heating. Orig. art. has: 1 table. [JPRS: 37,023]

SUB CODE: 07 / SUBM DATE: 06Jul65 / ORIG REF: 004 / OTH REF: 003

Card 1/1 45

UDC: 547.26'118

GLUSHKOVA, M.A.

TANANAYEV, I.V.: GLUSHKOVA, M.A.: SEYFER, G.B.

Chemistry of lanthanum ferrocyanides and their application in analytical chemistry. Khim.redk.elem. no.1:58-86 '54. (MLRA 8:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR.

(Lanthanum ferrocyanide)

GLUSHKOVA, A. A.

CH
O

USSR

Physicochemical analysis of systems having value in analytical chemistry. ²⁵STV. Study of reaction of formation of aluminum hydroxide by measurement of the apparent volumes of the precipitates. I. V. Tananaev and M. A.

Glushkova. *Trudy Komissii anal. Khim., Akad. Nauk S.S.S.R., Otd. Khim. Nauk* 5(8), 22-53(1954); cf. *ibid.* 47, 93(9); 48, 8012a. — The apparent vol. of the ppt. is used to study the pptn. of $Al(OH)_3$. The vol. of ppt. is plotted against the ratio $OH:Al$ in the original mixt. Carbonate-free $NaOH$ soln., and $Al(NO_3)_3$ and $Al_2(SO_4)_3$ solns. contg. no free acid were used. Into a 25-ml. graduated tube introduce the Al soln., H_2O , and $NaOH$, in such a mts. that after addn. of the $NaOH$ the vol. is 25 ml. Stopper the tube and then invert approx. 200 times. After a detd. interval read the upper boundary of the ppt. In expts. with const. Al content (0.01-0.04M) sep'n. of ppt. begins when the ratio $OH:Al$ is approx. 2.4. The curve has a max. at $OH:Al \approx 3$. At $OH:Al \approx 2.8$, Al cannot be detected in soln. and the vol. of ppt. is much less than at $OH:Al \approx 3$. At $OH:Al$ somewhat above 4, the ppt. dissolves completely. After 1 hr. the max. could be noticed clearly. After 24 hrs. the vol. of ppt. was const. After several hrs. at room temp. the ppts. which started out with $OH:Al > 3$ became whiter but the others did not change. If 1-2 ml. concd. HCl is added to each tube and mixed, the ppts. formed with $OH:Al < 3$ quickly dissolve but the others remain insol. for 24 hrs. In expts. where the sum of $Al(NO_3)_3$ and $NaOH$ concns. always equalled 0.1M, addn. of $NaNO_3$ (0.5 and 1M) before the $NaOH$ does not change the general outline of the curve but pptn. begins earlier. With the system $Al(NO_3)_3-NH_4OH-H_2O$ the vol. of the ppt. is a max. at $OH:Al \approx 3$ but the

(over)

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MET

2/2

I. V. TANANAEV

ceases sharply when more NH_4OH is added. When NH_4NO_3 (0.1 and 0.3M) is added before NH_4OH this max. is displaced to the left immediately after pptn. but on standing re-scores the max. to $\text{OH}:\text{Al} = 3$. At $\text{NH}_4\text{NO}_3 = 1M$ the max. is displaced slightly to the right and vol. of ppt. does not decrease so sharply when excess NH_4OH is added. Pptn. occurs earlier than $\text{OH}:\text{Al} = 2$. With $\text{Al}_2(\text{SO}_4)_3 = 0.01M$ and NaOH , pptn. begins approx. where it does with $\text{Al}(\text{NO}_3)_3$. Then 2 max. are observed, at $\text{OH}:\text{Al} = 2.5$ and at 3, with a min. between them. The min. develops more clearly by aging. With $\text{Al}_2(\text{SO}_4)_3 = 0.03M$ and with NaOH , there is only 1 max. at 2.5. For $\text{Al}_2(\text{SO}_4)_3 = 0.02M$ and with NH_4OH , the first max. remains the same but second max. is less sharp. (NH_4SO_4 is added to system $\text{Al}(\text{NO}_3)_3 \cdot \text{NH}_4\text{OH} \cdot \text{H}_2\text{O}$ with $\text{Al}(\text{NO}_3)_3 = 0.04M$. With no sulfate pptn. begins at $\text{OH}:\text{Al} = 2.5$. With 0.02M of $(\text{NH}_4)_2\text{SO}_4$ added the ppt. is stable at $\text{OH}:\text{Al} = 2$ and the vol. is larger. The max. is still at 2. With $(\text{NH}_4)_2\text{SO}_4$ at 0.01M this max. is at 2.5-3.7 and a very weak second max. is displaced to the right. At $(\text{NH}_4)_2\text{SO}_4 = 0.03M$ the first max. is at 2.5-2.7 and the second max. is more noticeable. At $(\text{NH}_4)_2\text{SO}_4 = 0.3M$ the first max. is at 2.5 and the second max. disappears. In significant concn. of sulfate the max. vol. of ppt. is obtained at a point corresponding to a basic salt, $10 \text{ Al}(\text{OH})_3 \cdot \text{Al}_2(\text{SO}_4)_3$. No Al ions are detected in soln. at $\text{OH}:\text{Al} = 2.4$. Existence of second max. depends on many conditions. It is suggested that with a large excess of Al^{3+} the ions $\text{Al}(\text{OH})_2^+$ and $\text{Al}(\text{OH})_4^-$ are formed. With small excess of Al^{3+} colloidal $\text{Al}(\text{OH})_3$ is formed. Since, even in the presence of electrolytes, $\text{Al}(\text{OH})_3$ is not sood, earlier than $\text{OH}:\text{Al} = 2$, that value may be the boundary between the forms. The intermediate stage would be a colloidal micelle, $[\text{Al}(\text{OH})_3]_n$, $[\text{Al}(\text{OH})_3]_n \text{Cl}^+$, for NaOH or NH_4OH systems. AlO^- , P^- and oxalate cause early pptn. of Al. In the case of Al^{3+} as $\text{Al}(\text{OH})_3$ from bivalent systems by action of NaOH , an excess of NaOH causes the formation of a basic salt, $10 \text{ Al}(\text{OH})_3 \cdot \text{Al}_2(\text{SO}_4)_3$, and thus causes the formation of the first max. at 2.5.

TANANAYEV, I.V.; GLUSHKOVA, M.A.; SEYFER, G.B.

Ferrocyanide solubility series. Zhur.neorg.khim. 1 no.1:66-68 '56.
(MIRA 9:10)

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Akademii nauk SSSR.
(Ferrocyanides)

Cheshire, Ct.

AUTHOR: Tananaev, I.V., Seifer, G.B., and Glushkova, M.A. 560

TITLE: Ferrocyanides of Trivalent Iron (G Ferrotsianidakh Trekhvalent-novo Zheleza.)

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.II, No.2, pp.268-280. (U.S.S.R.) (1955)

ABSTRACT: In this investigation the behaviour of the cyanides of trivalent iron in systems with lithium, sodium, potassium, rubidium and caesium has been studied by two methods: that of solubility and that of e.m.f. measurement. The equilibrium solutions obtained in the solubility experiments were used for the parallel study of the systems by the e.m.f. method using a platinum electrode with a saturated calomel electrode. From the results obtained conclusions are drawn on the general behaviour of trivalent iron ions in and ferrocyanides of different alkali metals when present together in systems. Differences due to the nature of the individual alkali metals were also noted. The tendency, to all the alkali metals was the formation of mixed ferrocyanides of iron although the nature of these compounds was very different for the different alkali metals. The stoichiometrically normal iron ferrocyanide $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$ is not formed with any of the systems studied. On incomplete precipitation of iron it either becomes adsorbed (systems with $\text{Li}_4[\text{Fe}(\text{CN})_6]$, and $\text{Na}_4[\text{Fe}(\text{CN})_6]$), or remains

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Ferrocyanides of Trivalent Iron (Cont.)

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in excess (systems with $K_4(Rb_4, Cs_4)[Fe(CN)_6]$), an effect evidently due to coprecipitation of the alkali metal.

$M_4[Fe(CN)_6]$ enters the precipitate as soon as the precipitation of iron is complete even with lithium and sodium. This is especially pronounced with rubidium and caesium. The contents of alkali metal in the precipitate increased according to the series $K - Rb - Cs$.

It appears that with potassium, rubidium and caesium mixed salts of the simplest type $M_4Fe[Fe(CN)_6]$ are formed at first. It is very likely that the salts $RbFe[Fe(CN)_6]$ and $CsFe[Fe(CN)_6]$ do exist, but they react easily with $M_4[Fe(CN)_6]$ to form a second mixed salt of the composition $M_4Fe_2[Fe(CN)_6]_3$.

Although the continued adsorption of $M_4[Fe(CN)_6]$ by the precipitate makes the interpretation of the experimental curves difficult the possibility of the formation of new incongruently soluble mixed salts of definite composition is not excluded.

As regards the strength of the bond in mixed ferrocyanoïdes of iron and alkali metals, the latter can be arranged in the usual series with caesium having the greater strength and lithium the least. Apparently in the mixed salts the alkali metals can mutually replace each other according to the above order. From this point of view mixed ferrocyanoïdes of trivalent iron can be considered as inorganic prototypes of non-exchange resins.

14 Figures and 2 Tables.

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561

Mixed Ferrocyanides of Thallium. 1. Mixed Ferrocyanides of Thallium with Magnesium, Calcium and Strontium (Cont.)

resemble them: this is indicated by the fact that they all belong to the single type $M_2E [Fe(CN)_6]$. As regards solubility in water, the compounds of thallium considered most closely resemble the corresponding rubidium and caesium compounds.

There are 7 references, one of them Russian.

There are 3 figures and 3 tables.

Received on 22nd October, 1956.

Card 2/2

Glushkova, M. A.

78-3-13/35

AUTHORS: Tananayov, I. V. and Glushkova, M. A.

TITLE: Mixed Ferrocyanides of Thallium. (O smeshannykh ferrotsianidakh talliya.) II. Mixed Ferrocyanides of Thallium with Copper and Nickel. (II. Smeshannye ferrotsianidy talliya s med'yu i nikelem.)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 586-593. (USSR)

ABSTRACT: This investigation had as its aim to fill the gap in the literature on the nature of the reaction of copper and nickel ions with ferrocyanide ions in the presence of thallium. The potential importance of such an investigation is that the information it provided will be used to decide whether thallium in very low concentration could be isolated from solutions containing certain non-ferrous metals. Ordinary methods of chemical analysis were used in this investigation to study systems consisting of Tl^+ , E^{2+} ($E = Cu, Ni$) and $[Fe(CN)_6]^{4-}$. It is concluded that the slightly soluble mixed ferrocyanide of thallium and copper,

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78-3-13/35

Mixed Ferrocyanides of Thallium. II.

$Tl_2Cu_2[Fe(CN)_6]_2$, is formed from the appropriate ions for the whole range of concentrations dealt with. The solubility of the compound formed as a result of the displacement of Cu^{2+} ions by Tl^+ ions from a precipitate of $Cu_2[Fe(CN)_6]$ was found to be so small that a suspension of this precipitate can be used to separate small quantities of thallium from solution. The mixed salt $Tl_4Ni_4[Fe(CN)_6]_3$ was formed by the reaction of Tl^+ with Ni^{2+} and $[Fe(CN)_6]^{4-}$ ions. The solubility of the precipitate of this salt, formed by the reaction of Tl^+ ions with a precipitate of nickel ferrocyanide is so low that it, too, can be used for separating small quantities of thallium from solution. There are 4 figures, 7 tables, and 6 references 2 of which are Slavic.

SUBMITTED: October 26, 1956.

AVAILABLE: Library of Congress.
Card 2/2

78-3-14/35

AUTHORS: Tananayev, I. V. and Glushkova, M. A.

TITLE: Ferrocyanides of Thallium. (O Ferrotsianidakh talliya.) III. Mixed ferrocyanides of thallium with uranyl. (III. Smeshannyye ferrotsianidy talliya s uranilom.)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 594-599. (USSR)

ABSTRACT: An account is given of the study of the solubility of the system $TlNO_3 \cdot UO_2(NO_3)_2 \cdot Li_4[Fe(CN)_6] \cdot H_2O$ at $25^\circ C$. Solutions of these compounds were used, the molarity of the thallium nitrate solution being determined by precipitating thallium as chromate, that of lithium cyanide by titration of a known volume of the original solution by potassium manganate in sulphuric acid using crystal violet as an indicator. The concentration of the uranium salt was determined by precipitation of $(UO_2)^{2+}$ in the presence of carbonate-free ammonium nitrate, the precipitate after washing and calcining being weighed as U_3O_8 . No formation was observed of

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78-3-14/35

Ferrocyanides of Thallium. III.

the simple ferrocyanide of uranyl, the reaction of the ions leading to the formation of two mixed ferrocyanides of thallium and uranium with the compositions: $Tl_2(UO_2)_3[Fe(CN)_6]_2$ and $Tl_4(UO_2)_4[Fe(CN)_6]_3$. All the alkaline metals and thallium can be arranged in the following series with respect to their ability to displace $[UO_2]^{2+}$ ions from the precipitate of $(UO_2)_2[Fe(CN)_6]$: $Tl \gg Cs > Rb > K > Na > Li$, from which it follows that suspensions of this precipitate can be used for separating small quantities of thallium from solution. There are 2 figures, 6 tables, and 5 references 2 of which are Slavic.

SUBMITTED: November 19, 1956.

AVAILABLE: Library of Congress.

Card 2/2

St. Petersburg
TANANAYEV, I.V.; GIUSHKOVA, M.A.

Thallium ferrocyanides. Part 4: Mixed ferrocyanides of thallium
with lanthanum and cerium. Zhur. neorg. khim. 2 10:2474-2482
O '57. (MIRA 11:3)
(Thallium ferrocyanide) (Lanthanum) (Cerium)

SOV/78-4-7-33/44

5(2)

AUTHOR:

Glushkova, M. A.

TITLE:

On the Reaction of the Formation of the Hydroxide of Trivalent Thallium (O reaktsii obrazovaniya gidroksidi trekhvalentnogo talliya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1657-1660 (USSR)

ABSTRACT:

Whereas the system $Al(NO_3)_3 \cdot NaOH - H_2O$ and the corresponding systems of gallium and indium have already been investigated (Refs 1,2,3), only very few published data are available for thallium hydroxide, because most investigations (Refs 4-11) deal with Tl_2O_3 . The present paper investigates the formation of thallium hydroxide in the system $TlCl_3 - NaOH - H_2O$ by means of the method of the solubility and by measuring the apparent volume of precipitations. It follows from table 1 and figure 1 that the reaction between $TlCl_3$ and $NaOH$ is accompanied by the formation of practically pure $Tl(OH)_3$. Only in the case of a considerable surplus of $TlCl_3$ does the precipitate adsorb Tl^{3+} .

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307/78-4-7-33/46

On the Reaction of the Formation of the Hydroxide of Trivalent Thallium

ions or $TlCl_3$. Basic salts, such as occur in Al, Ga, In, do not form, so that Tl in this respect forms an exception. The apparent volume of the precipitates is given by table 2 and figure 2. In the case of an excess of $TlCl_3$, the precipitate is, however, compact (probably because of the adsorption mentioned), whereas it is loose at the stoichiometric point. In the case of an excess of alkali, no considerable variation of the volume of the precipitate occurs. There are 2 figures, 2 tables and 12 references, 4 of which are Soviet.

SUBMITTED: April 4, 1958

Card 2/2

88471

S/078/61/006/001/003/019
B017/B054

5.2200

AUTHOR: Glushkova, M. A.

TITLE: Molybdonitrile Chloride

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1,
pp. 15 - 17

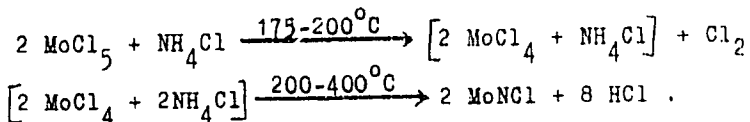
TEXT: The author reports on the synthesis of MoNCl from MoCl_5 and NH_4Cl .
A mixture of the two reagents (1 : 3) was heated in a crucible furnace in
argon atmosphere. Black MoNCl powder was isolated as end product of the
reaction of MoCl_5 and NH_4Cl at 350 and 400°C. MoNCl is stable in air,
not hydrolyzable by water, and insoluble in sulfuric acid. It is nearly
insoluble in benzene, chloroform, and methyl alcohol. An analysis yielded
the ratio of $\text{Mo} : \text{N} : \text{Cl} = 1.03 : 1.02 : 1$ at 400°C. The tetravalence of
molybdenum in MoNCl was confirmed permanganatometrically. During the
reaction, pentavalent molybdenum is transformed into tetravalent one, and
 MoNCl is formed according to the following equations:

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88471

Molybdonitrile Chloride

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B017/B054



The amorphous character of MoNCl was established by X-ray analysis.
Molybdenum nitride, MoN, is formed on heating MoNCl up to 900°C. Thus,

Mo⁴⁺ shows a higher stability as compared with the nitrile chloride derivatives of P and Nb. I. V. Tananayev, G. B. Seyfer, and Ye. A. Ionova are mentioned. There are 1 figure, 2 tables, and 8 references: 3 Soviet, 4 German, and 1 British.

SUBMITTED: June 21, 1960

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88472

S/078/61/006/001/004/019
B017/B054

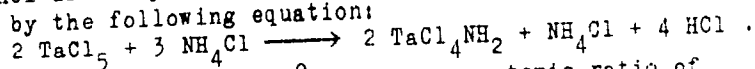
5.2200

AUTHORS: Glushkova, M. A., Yevteyeva, M. M.

TITLE: Tantalum Analogue of Phosphonitrile Chloride

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1,
pp. 18 - 20

TEXT: The authors studied the reaction between tantalum pentachloride and ammonium chloride. Tantalum pentachloride was produced by chlorination of metallic tantalum in a chlorine flow at 250 - 350°C by I. S. Morozov's method (Ref.11). Analyses of reaction products of $TaCl_5$ with NH_4Cl yielded a ratio of Ta : N : Cl = 1 : 2 : 5. The nonreacted excess NH_4Cl was removed by sublimation. At 250°C, $TaCl_5$ and NH_4Cl react with generation of HCl. At 350°C, HCl is fully driven out. The course of reaction at 250°C is expressed by the following equation:



The compound isolated at 350°C has a mean atomic ratio of

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Tantalum Analogue of Phosphonitrile Chloride S/073/61/006/001/004/019
B017/B054

Ta : N : Cl = 1 : 0.99 : 2.20. This ratio suggests the existence of $TaNC l_2$.
A phase analysis confirmed the existence of this compound. $TaNC l_2$ is a
yellowish-green, air-resistant powder, insoluble in mineral acids with the
exception of HF. By boiling with concentrated alkali hydroxide, $TaNC l_2$
decomposes with formation of tantalum hydroxide. In organic solvents,
 $TaNC l_2$ is nearly insoluble; no decomposition occurs on heating to $500^{\circ}C$.
There are 1 table and 12 references: 5 Soviet, 2 US, and 7 German. VX

SUBMITTED: June 22, 1960

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S/078/61/006/002/004/017
BC17/BO54

AUTHORS: Glushkova, M. A., Petushkova, S. M.

TITLE: Ferrocyanides of Gadolinium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 2,
pp. 349 - 353

TEXT: The authors studied the reaction of the gadolinium ion with alkali ferrocyanides by solubility determinations, measurements of electrical conductivity, and analysis of the solid phases. Results of investigation of the system $GdCl_3 - M_4[Fe(CN)_6] - H_2O$ ($M = Li, Na, K, Rb, Cs$) are given in Fig. 4. It was found that a simple gadolinium ferrocyanide of the composition $Gd_4[Fe(CN)_6]_3$ was formed in the reaction of $GdCl_3$ with $Li_4[Fe(CN)_6]$. The existence of this compound was confirmed by measurements of electrical conductivity and emf. The reaction of $GdCl_3$ with $Na_4[Fe(CN)_6]$ proceeds stepwise. First, $Gd_4[Fe(CN)_6]_3$ is formed, and then $NaGd[Fe(CN)_6]$. Fig. 4

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Ferrocyanides of Gadolinium

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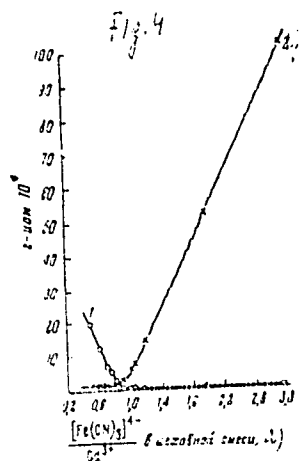
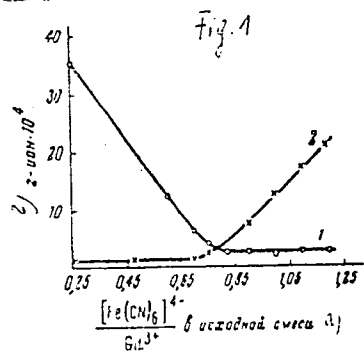
shows the interaction in the system $GdCl_3 - Na_4[Fe(CN)_6] - H_2O$, and Fig. 5 shows the change in emf and the potential jumps. In the reaction of $GdCl_3$ with the ferrocyanides of potassium, rubidium, and cesium, compounds of the type $MGd[Fe(CN)_6]$ ($M = K, Rb, Cs$) are formed. The solubilities of $Gd_4[Fe(CN)_6]$, $NaGd[Fe(CN)_6]$, $KGd[Fe(CN)_6]$, $RbGd[Fe(CN)_6]$, and $CsGd[Fe(CN)_6]$ in water at 25°C are: $1.6 \cdot 10^{-4}$, $6 \cdot 10^{-4}$, $2.2 \cdot 10^{-4}$, $1.2 \cdot 10^{-4}$, and $2.8 \cdot 10^{-5}$ mole/l. With the solubility determination of $CsGd[Fe(CN)_6]$, gadolinium can be determined in pure solutions by the potentiometric method. The authors refer to corresponding investigations carried out at the laboratoriya khimii i analiza redkikh elementov Instituta obshchey i neorganicheskoy khimii AN SSSR im. N. S. Kurnakova (Laboratory of Chemistry and Analysis of Rare Elements of the Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the AS USSR), and mention I. V. Tananayev, M. A. Glushkova, G. B. Seyfer, and G. V. Shevchenko. There are 11 figures, 2 tables, and 8 references; 5 Soviet.

Card 2/4

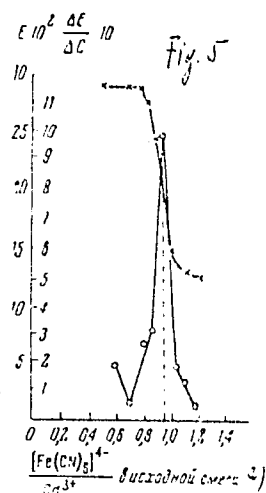
Ferrocyanides of Gadolinium

S/078/61/006/002/004/017
3017/3054

SUBMITTED: November 19, 1959



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S/078/61/006/002/004/017
BC17/3054

Legend to Fig. 1: a) in initial mixture; b) g/ion·10⁴; 1: Cd³⁺; 2: Fe(CN)₆⁴⁻. Legend to Figs. 4, 5: a) in initial mixture; 1, 2 as in Fig. 1

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